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Nitrogen gas was volatilized from livestock manure and is returned to soil by precipitation, it increases nitrogen load if the amount is large. In Japan, the forest accounts for 70% of the country, and most nitrogen compounds are absorbed by the forest soil, which performed removal and/or storage of nitrogen. In our previously study, we discussed the relationship of nitrogen removal and/or retention and forest management bycomparing the abundance of ammonia-oxidizing archaea (AOA) and ammonia-oxidizing bacteria (AOB) in forest soils of different thinning intensity. AOA and AOB are important microorganism responsible for part of the global nitrogen cycle, but in this study we focused on Anammox bacteria that intensifies ammonia oxidation activity more than AOA and AOB. Anammox bacteria have a reaction pathway that uses ammonia as an electron donor, nitrite as an electron acceptor, directly producing the nitrogen gas under anaerobic condition. Anammox bacteria is found in the environmental conditions with relatively high water content: ocean, paddy soil and manure pond, but the recently study reported it was detected from field soil. Compared to cultivated land, the large soil stirring does not occur in the forest, so we considered that there are likely to be anaerobic condition there and Anammox bacteria living there may contribute to nitrogen removal with AOA and AOB. In this study, cores were taken from unthinned, weakly and intensively thinned forests at the depth of 5cm and 20cm in June, August and November. All DNA from the soil samples was extracted and amplified by PCR with primers amx368F and amx820r. They are amplicons with the length of approximately 450 bp, which were confirmed from all the soil samples regardless of the depth and the thinning intensity. They were also analyzed by sequencing and homology search. Moreover, we investigated the seasonal change in the number of Anammox bacteria by real-time PCR.